### **IDAPA 58 - DEPARTMENT OF ENVIRONMENTAL QUALITY**

### 58.01.02 - WATER QUALITY STANDARDS

### DOCKET NO. 58-0102-1201

### NOTICE OF RULEMAKING - ADOPTION OF PENDING RULE

**EFFECTIVE DATE:** This rule has been adopted by the Board of Environmental Quality (Board) and is now pending review by the 2016 Idaho State Legislature for final approval. The pending rule will become final and effective immediately upon the adjournment *sine die* of the Second Regular Session of the Sixty-third Idaho Legislature unless prior to that date the rule is rejected in whole or in part by concurrent resolution in accordance with Idaho Code §§ 67-5224 and 67-5291.

**AUTHORITY:** In compliance with Section 67-5224, Idaho Code, notice is hereby given that the Board has adopted a pending rule. This action is authorized by Idaho Code §§ 39-105, 39-107, and 39-3601 et seq.

**DESCRIPTIVE SUMMARY:** A detailed summary of the reason for adopting the rule is set forth in the initial proposal published in the Idaho Administrative Bulletin, October 7, 2015, Vol. 15-10, pages 653-678. After consideration of public comments, the rule has been revised at Section 210. The remainder of the rule has been adopted as initially proposed. The Rulemaking and Public Comment Summary can be obtained at www.deq.idaho.gov/58-0102-1201 or by contacting the undersigned.

**IDAHO CODE SECTION 39-107D STATEMENT:** The standards included in this rule are not broader in scope, nor more stringent, than federal regulations and do not regulate an activity not regulated by the federal government.

**FISCAL IMPACT STATEMENT:** The following is a specific description, if applicable, of any negative fiscal impact on the state general fund greater than ten thousand dollars (\$10,000) during the fiscal year when the pending rule will become effective: Not applicable.

ASSISTANCE ON TECHNICAL QUESTIONS: For assistance on technical questions concerning this rulemaking, contact Don Essig at don.essig@deq.idaho.gov, (208)373-0119.

Dated this 6th day of January, 2016.

Paula J. Wilson Hearing Coordinator Department of Environmental Quality 1410 N. Hilton Boise, Idaho 83706-1255 (208)373-0418/Fax No. (208)373-0481 paula.wilson@deq.idaho.gov

#### DOCKET NO. 58-0102-1201 -- ADOPTION OF PENDING RULE

Substantive changes have been made to the pending rule. Italicized red text that is <u>double underscored</u> is new text that has been added to the pending rule.

Only those sections or subsections that have changed from the original proposed text are printed in this Bulletin following this notice.

The text of the proposed rule was published in the Idaho Administrative Bulletin, Vol. 15-10, pages 653 through 678

This rule has been adopted as a pending fee rule by the Agency and is now awaiting review and final approval by the 2016 Idaho State Legislature.

# THE FOLLOWING IS THE AMENDED TEXT OF THE PENDING RULE FOR DOCKET NO. 58-0102-1201 (Only Those Sections With Amendments Are Shown.)

### [Subsection 210.01 - All]

## 210. NUMERIC CRITERIA FOR TOXIC SUBSTANCES FOR WATERS DESIGNATED FOR AQUATIC LIFE, RECREATION, OR DOMESTIC WATER SUPPLY USE.

- **O1. Criteria for Toxic Substances**. The criteria of Section 210 apply to surface waters of the state as follows. (5-3-03)
  - a. Columns B1; and B2; and C2 of the following table apply to waters designated for aquatic life use. (5-3-0.3)(
- b. Column C2 of the following table applies to waters designated for <u>primary or secondary contact</u> recreation use.  $\frac{(5-3-03)(}{}$ 
  - c. Column C1 of the following table applies to waters designated for domestic water supply use.

Note: In 2006, Idaho updated 167 human health criteria for 88 chemicals. On May 10, 2012, EPA disapproved Idaho's 2006 update of 167 human health criteria for toxic substances and the use of 17.5 g/day fish consumption rate for human health criteria (see IDAPA 58.01.02.210.05.b.i). This action was based on EPA's judgment that the fish consumption rate used in criteria derivation was not adequately protective. As a result of this action, the human health criteria published in the 2005 version of IDAPA 58.01.02.210.01 continue to apply and are effective for federal Clean Water Act purposes. These criteria are summarized in "Numeric Criteria for Toxic Substances (2005)" located at http://www.deq.idaho.gov/media/451725-human\_health\_criteria.pdf.

For more information regarding this EPA disapproval, go to http://www.deq.idaho.gov/epa-actions-on-proposed-standards.

Idaho Administrative Bulletin

Page 190

January 6, 2016 - Vol. 16-1

	Α			B Aquatic life				<u>C</u> Human health for consumption of:					
(	Number) Compound	<sup>a</sup> CAS Number	b CN (µg/	L)	<sup>b</sup> СС (µg// В2	L)	Carcinogen?	Water & <del>organisms</del> (µg/L) C1	fish	Organisms [ only (µg/L) C2	<u>Fish</u>		
1	Antimony	7440360						<del>5.6</del> <u>5.2</u>	С	640 <u>190</u>	С		
2	Arsenic	7440382	340	е	150	е	Y	10	d <u>fq</u>	10	d <u>fq</u>		
3	Beryllium	7440417							h		h		
4	Cadmium	7440439	1.3	i	0.6	İ			h		h		
5a	Chromium III	16065831	570	i	74	i			h		h		
5b	Chromium VI	18540299	16	е	11	е			h		h		
6	Copper	7440508	17	i	11	i		1,300	Д				
7	Lead	7439921	65	ì	2.5	i			h		h		
8a	Mercury	7439976		g		g							

Note: In 2005, Idaho adopted EPA's recommended methylmercury fish tissue criterion for protection of human health. The decision was made to remove the old tissue-based aquatic life criteria and rely on the fish tissue criterion to provide protection for aquatic life as well as human health. Thus, current Idaho water quality standards do not have mercury water column criteria for the protection of aquatic life. While EPA approved Idaho's adoption of the fish tissue criterion in September 2005, it had withheld judgment on Idaho's removal of aquatic life criteria. On December 12, 2008, EPA disapproved Idaho's removal of the old aquatic life criteria. The water column criteria for total recoverable mercury effective for federal Clean Water Act purposes are located at <a href="http://www.deq.idaho.gov/epa-actions-on-proposed-standards">http://www.deq.idaho.gov/epa-actions-on-proposed-standards</a>.

8b	Methylmercury	22967926								0.3 mg/kg	р
9	Nickel	7440020	470	i	52	i		640 58	С	4600 <u>100</u>	С
10	Selenium	7782492	20	f	5	f		<del>170</del> <u>29</u>	Ç	42 <del>00</del> <u>250</u>	<u>c</u>
11	Silver	7440224	3.4	į							
12	Thallium	7440280						0.24 0.017	С	0.47 0.023	С
13	Zinc	7440666	120	i	120	i		7400 870	Ē	26000 <u>1,500</u>	<u>c</u>
14	Cyanide	57125	22	j	5.2	j		440 <u>3.9</u>	С	440 <u>140</u>	С
15	Asbestos	1332214						7,000,000 fibers/L	kg		
16	2, 3, 7, 8-TCDD Dioxin	1746016					Y	0.000000005 1.8E-08	<u>c</u> l	0.0000000051 1.9E-08	<u>c</u> l
17	Acrolein	107028						<del>190</del> <u>3.2</u>	<u>c</u>	<del>290</del> <u>120</u>	<u>c</u>
18	Acrylonitrile	107131					Y	0.051 0.60	cl	<del>0.25</del> <u>22</u>	cl
19	Benzene	71432						2230	cl	<del>51</del> <u>28</u>	Cį
20	Bromoform	75252					Y	4-362	cl	149 <u>380</u>	cl

	Α		B Aquatic life			${\underline{\mathbb C}}$ Human health for consumption of:				
(1	Number) Compound	a CAS Number	b CMC (µg/L)	b CCC (µg/L) B2	Carcinogen?	Water & <del>organisms <u>fish</u> (µg/L)</del>		Organisms <u>Fisl</u> only (µg/L)		
			B1	DZ.	Ca	C1		C2		
21	Carbon Tetrachloride	56235			Y	0.23 3.6	cl	<del>1.6</del> <u>15</u>	cl	
22	Chlorobenzene	108907				<del>130</del> <u>89</u>	С	4600 <u>270</u>	С	
23	Chlorodibromomethane	124481			Y	0.40 7.4	cl	<del>13</del> <u>67</u>	cl	
24	Chloroethane	75003					<u>h</u>		<u>h</u>	
25	2-Chloroethylvinyl Ether	110758					<u>h</u>		<u>h</u>	
26	Chloroform	67663				5.7 61	<u>lc</u>	470 <u>730</u>	łς	
27	Dichlorobromomethane	75274			TY	0.55 8.8	cl	47 86	cl	
28	1,1-Dichloroethane	75343			+		<u>h</u>		<u>h</u>	
29	1,2-Dichloroethane	107062			TY	0.38 96	cl	<del>3</del> 7 2,000	cl	
30	1,1-Dichloroethylene	75354				330 310	₽Ġ	7100 5,200		
31	1,2-Dichloropropane	78875			Y	0.50 8.5	cl	45 98	cl	
32	1,3-Dichloropropene	542756			Y	0.34 2.5	cl	24 38	cl	
33	Ethylbenzene	100414			1	<del>530</del> 32	С	2100 41	C	
34	Methyl Bromide	74839			11	47 130	С	<del>====</del> <del>1500</del> 3,700	С	
35	Methyl Chloride	74873					h		h	
36	Methylene Chloride	75092			$\dagger \dagger$	4.6 38	c/	590 960	C/	
37	1,1,2,2- Tetrachloroethane	79345			Y	0.17 1.4	cl	4.0 <u>8.6</u>	cl	
38	Tetrachloroethylene	127184			11	0.69 15	₫	9-3 <u>23</u>	⊈	
39	Toluene	108883			T	4300 <u>47</u>	С	45000 <u>170</u>	С	
40	1,2-Trans- Dichloroethylene	156605				440 <u>120</u>	С	40000 <u>1,200</u>	С	
41	1,1,1-Trichloroethane	71556				11,000	hg	56,000	<i>h</i> ⊆	
42	1,1,2-Trichloroethane	79005			Y	0.59 4.9	cl	46 29	cl	
43	Trichloroethylene	79016			+	2-5 2.6	<u>c</u> ł	30 <u>11</u>	<u>c</u> /	
44	Vinyl Chloride	75014			Y	0.025 0.21	<u>c</u> l	<del>====</del> <del>2.4</del> 5.0	<u></u>	
45	2-Chlorophenol	95578			++	84 <u>30</u>	С	<del>150</del> 260	С	
46	2,4-Dichlorophenol	120832			$\dagger \dagger$	77 9.6	С	290 19	С	
47	2,4-Dimethylphenol	105679			+	380 110	С	850 <u>820</u>	С	
48	2-Methyl-4,6- Dinitrophenol	534521				43 <u>1.6</u>	<u>c</u>	280 8.6	<u>c</u>	

	Α	Aq	B uatic lit	fe		<u>C</u> Human health for consumption of:				
(	Number) Compound	a CAS Number	b CMC (µg/L)	(μ	CCC g/L)	Carcinogen?	Water & <del>organisms</del> <u>fi</u> (µg/L)	<u>sh</u>	Organisms <u>Fis</u> only (µg/L)	<u>sh</u>
			B1	t	32	ä	C1		C2	
49	2,4-Dinitrophenol	51285					69 12	С	5300 110	С
50	2-Nitrophenol	88755						<u>h</u>		<u>h</u>
51	4-Nitrophenol	100027						<u>h</u>		<u>h</u>
52	3-Methyl-4- Chlorophenol	59507					<u>350</u>	<u>c</u>	750	<u>c</u>
53	Pentachlorophenol	87865	20 m	1 13	m	Y	0-27 <u>0.11</u>	cl	3.0 <u>0.12</u>	cl
54	Phenol	108952					21000 3,800	С	4700000 <u>85,000</u>	С
55	2,4,6-Trichlorophenol	88062					1.4 <u>1.5</u>	c/	2420	Cį
56	Acenaphthene	83329				<b> </b>	670 26	С	990 28	С
57	Acenaphthylene	208968						<u>h</u>		<u>h</u>
58	Anthracene	120127					8300 110	С	40000 120	С
59	Benzidine	92875				Y	0.000086 0.0014	cl	0.0020 <u>0.033</u>	cl
60	Benzo(a)Anthracene	56553				Y	0.0038 0.0042	cl	0.018 0.0042	cl
61	Benzo(a)Pyrene	50328				Y	0.0038 0.00042	cl	0.018 0.00042	cl
62	Benzo(b)Fluoranthene	205992				Y	0.0038 0.0042	cl	0.018 0.0042	cl
63	Benzo(ghi)Perylene	191242			*************	<b> </b>		<u>h</u>		<u>h</u>
64	Benzo(k)Fluoranthene	207089				Y	0.0038 0.042	cl	9.948 <u>0.042</u>	cl
65	Bis(2-Chloroethoxy) Methane	111911						<u>h</u>		<u>h</u>
66	Bis(2-Chloroethyl)Ether	111444	<b></b>			Y	0.030 0_29	cl	0.53 <u>6.8</u>	cl
67	Bis(2-Chloroisopropyl) Ether	108601					1400 220	С	65000 1,200	С
68	Bis(2-Ethylhexyl) Phthalate	117817				Y	4.2 1.2	cl	2-2 1.2	cl
69	4-Bromophenyl Phenyl Ether	101553						<u>h</u>		<u>h</u>
70	Butylbenzyl Phthalate	85687					4500 <u>0.33</u>	С	1 <del>90</del> 0 <u>0.33</u>	С
71	2-Chloronaphthalene	91587			***************************************	<b></b>	1000 330	С	<del>1600</del> 380	С
72	4-Chlorophenyl Phenyl Ether	7005723						<u>h</u>		<u>h</u>

	А		B Aquatic life			${\mathbb C}$ Human health for consumption of:					
(1	Number) Compound	a CAS Number	b CMC (µg/L)	b ccc (µg/L)	Carcinogen?	Water & <del>organisms</del> <u>fi</u> (µg/L)	ish	O <del>rganisms</del> <u>Fis</u> only (µg/L)	<u>sh</u>		
			B1	B2	Car	C1		C2			
73	Chrysene	218019			Y	<del>0.0038</del> <u>0.</u> 42	cl	0.018 <u>0.42</u>	cl		
74	Dibenzo (a,h) Anthracene	53703			Y	0.0038 0.00042	cl	0.018 <u>0.000</u> 42	cl		
75	1,2-Dichlorobenzene	95501				420 700	С	<del>1300</del> <u>1,100</u>	С		
76	1,3-Dichlorobenzene	541731				320 <u>3.5</u>	Ç	960 <u>4.8</u>	<u>c</u>		
77	1,4-Dichlorobenzene	106467				63 180	<u>C</u>	499 300	<u>c</u>		
78	3,3'-Dichlorobenzidine	91941			Y	0.024 0.29	cl	9.928 <u>0.48</u>	cl		
79	Diethyl Phthalate	84662				17000 200	С	44000 210	С		
80	Dimethyl Phthalate	131113				270000 600	<u>c</u>	4400000 <u>600</u>	<u>c</u>		
81	Di-n-Butyl Phthalate	84742				2000 8.2	С	4590 <u>8.3</u>	С		
82	2,4-Dinitrotoluene	121142			Y	0.11 0.46	<u>c</u> l	3.4 <u>5.5</u>	<u>يا</u>		
83	2,6-Dinitrotoluene	606202					<u>h</u>		<u>h</u>		
84	Di-n-Octyl Phthalate	117840			1		<u>h</u>		<u>h</u>		
85	1,2-Diphenylhydrazine	122667			Y	0.036 <u>0.25</u>	cl	0-20 <u>0.65</u>	cl		
86	Fluoranthene	206440				430 6.3	C	140 6.4	С		
87	Fluorene	86737				1100 21	С	5300 22	С		
88	Hexachlorobenzene	118741			Y	0.00028 0.00026	cl	0.00029 0.00026	cl		
89	Hexachlorobutadiene	87683			Y	9.44 0.031	cl	48 <u>0.031</u>	cl		
90	Hexachloro- cyclopentadiene	77474				40 1.3	<u>c</u>	1100 1.3	<u>c</u>		
91	Hexachloroethane	67721				4-4 0.23	C.į	3.3 <u>0.24</u>	C/		
92	Ideno (1,2,3-cd) Pyrene	193395			Y	0.0038 0.0042	cl	0.018 <u>0.00</u> 42	cl		
93	Isophorone	78591			Y	35 <u>330</u>	cl	960 6,000	cl		
94	Naphthalene	91203					<u>h</u>		<u>h</u>		
95	Nitrobenzene	98953			$\dagger$	47 <u>12</u>	C	690 <u>180</u>	С		
96	N-Nitrosodimethylamine	62759			Y	0.0069 0.0065	cl	<del>3.0</del> <u>9.1</u>	cl		
97	N-Nitrosodi-n- Propylamine	621647			Y	<i>9.0050</i> <u>0.046</u>	cl	0.51 <u>1.5</u>	cl		

	Α	Aqu	B ratic life		$\frac{\mathbb{C}}{}$ Human health for consumption of:					
(1	(Number) Compound Rumber		b CMC (µg/L)	b ccc (µg/L)	Carcinogen?	Water & <del>organism</del> s <u>fi</u> (µg/L)	<u>sh</u>	O <del>rganisms</del> <u>F).</u> only (µg/L)	<u>sh</u>	
			B1	B2	Š	C1		C2		
98	N-Nitrosodiphenylamine	86306			Y	3.314	cl	6-0 <u>18</u>	cl	
99	Phenanthrene	85018					<u>h</u>		<u>h</u>	
100	Pyrene	129000				830 <u>8.1</u>	С	4000 8.4	С	
101	1,2,4-Trichlorobenzene	120821	***************************************			35 <u>0.24</u>	<u>c</u>	70 <u>0.24</u>	<u>C</u>	
102	Aldrin	309002	3		Y	0.000049 2.5E-06	cl	0.00050 2.5E-06	cl	
103	alpha-BHC	319846			Y	0.0026 0.0012	cl	0.0049 <u>0.00</u> 13	cl	
104	beta-BHC	319857			Y	0.0001 0.036	cl	<del>0.01</del> 7 <u>0.045</u>	cl	
105	gamma-BHC (Lindane)	58899	2	0.08		0.98 1.4	<i>f</i> <u>c</u>	<del>1.8</del> <u>1.4</u>	łΩ	
106	delta-BHC	319868					<u>h</u>		<u>h</u>	
107	Chlordane	57749	2.4	0.0043	Y	0.00080 0.0010	cl	0.00081 0.001 <i>0</i>	cl	
108	4,4'-DDT	50293	1.1	0.001	Y	0.00022 9.8E-05	cl	0-00022 9-8E-05	cl	
109	4,4'-DDE	72559			Y	0.00022 5.5E-05	cl	0-00022 5.5E-05	cl	
110	4,4'-DDD	72548			Y	0.00031 0.00042	cl	0.00031 0.00042	cl	
111	Dieldrin	60571	2.5	0.0019	Y	0.000052 4.2E-06	cl	0.000054 4.2E-06	cl	
112	alpha-Endosulfan	959988	0.22	0.056		62 <u>7.0</u>	С	<del>89</del> <u>8.5</u>	С	
113	beta-Endosulfan	33213659	0.22	0.056		62 11	С	89 <u>14</u>	С	
114	Endosulfan Sulfate	1031078				62 9.9	С	89 <u>13</u>	С	
115	Endrin	72208	0.18	0.0023		0.059 <u>0.011</u>	С	0.060 0.011	С	
116	Endrin Aldehyde	7421934				0.29 0.38	С	0.30 0.40	С	
117	Heptachlor	76448	0.52	0.0038	Y	0.000079 2.0E-05	cl	0.000078 2.0E-05	cl	
118	Heptachlor Epoxide	1024573	0.52	0.0038	Y	0.000039 0.00010	cl	0.000039 0.00010	cl	
119	Polychlorinated Biphenyls PCBs:	n		0.014	n <u>Y</u>	0.000064 0.00019	clo	0.00064 0.00019	clo	
120	Toxaphene	8001352	0.73	0.0002	Y	0.0023	cl	0.00028 0.0023	cl	

Α			B Aquatic life			<u>C</u> Human health for consumption of:					
(Number) Compound		a CAS Number	b CMC (µg/L)	b CCC (µg/L)	Carcinogen?	Water & organisms fish (µg/L)		O <del>rganisms</del> <u>Fist</u> only (µg/L)			
			B1	B2	Š	C1		C2			
121	Chlorine		19 k	11 k							
122	1,2,4,5- Tetrachlorobenzene	<u>95943</u>				<u>0.0093</u>	<u>c</u>	<u>0.0094</u>	<u>c</u>		
123	2.4.5-Trichlorophenol	95954				140	<u>c</u>	190	<u>Q</u>		
124	Bis (Chloromethyl) Ether	542881			Y	0.0015	<u>cl</u>	0.055	<u>cl</u>		
<u>125</u>	Chlorophenoxy Herbicide (2.4,5-TP) [Silvex]	<u>93721</u>				82	2	<u>130</u>	2		
126	Chlorophenoxy Herbicide (2,4-D)	94757				1,000	<u>c</u>	3,900	<u>c</u>		
127	Dinitrophenols	25550587				13	<u>c</u>	<u>320</u>	Q		
128	Hexachlorocyclohexane (HCH)-Technical	608731			Y	0.027	<u>cl</u>	0.032	<u>cl</u>		
129	Methoxychlor	72435				0.0054	<u>c</u>	0.0055	<u>c</u>		
<u>130</u>	<u>Pentachlorobenzene</u>	608935				0.035	<u>c</u>	<u>0.036</u>	<u>ç</u>		

### Table Footnotes

a. Chemical Abstracts Service (CAS) registry numbers which provide a unique identification for each chemical.

b. See definitions of Acute Criteria (CMC) and Chronic Criteria (CCC), Section 010 of these rules.

А		B Aquatic life			${f \subseteq}$ Human health for consumption of:			
(Number) Compound	a CAS Number	b CMC (µg/L)	b ccc (µg/L)	Carcinogen?	Water & <del>organisms</del> <u>fish</u> (µg/L)	Organisms <u>Fish</u> only (µg/L)		
		B1	B2	Carc	C1	C2		

c. This criterion has been revised to reflect The Environmental Protection Agency's q1\* or RfD, as contained in the Integrated Risk Information System (IRIS) as of May 17, 2002. The fish tissue bioconcentration factor (BCF) from the 1980 Ambient Water Quality Criteria document was retained in each case. This criterion is based on input values to human health criteria calculation specified in Idaho's Technical Support Document (TSD) for Human Health Criteria Calculations - 2015. Criteria for non-carcinogens are calculated using the formula:

$$AWQC = RfD * RSC * \left(\frac{BW}{DI + (FI * BAF)}\right)$$

and criteria for carcinogens are calculated using the formula:

$$AWQC = RSD * \left( \frac{BW}{DI + (FI * BAF)} \right)$$

Where

AWQC = Ambient water quality criterion (mg/L)

BW = Human Body Weight (kg), 80 is used in these criteria

DI = Drinking Water Intake, (L/day), 2.4 is used in these criteria

FI = Fish Intake, (kg/day), 0.0665 is used in these criteria

BAF = Bioaccumualtion Factor, L/kg, chemical specific value, see TSD

RfD = Reference dose (mg/kg-day), chemical specific value, see TSD

Target Incremental Cancer Risk

Cancer Potency Factor

RSC = Relative Source Contribution, chemical specific value, see TSD

- d. Inorganic forms only.
- e. Criteria for these metals are expressed as a function of the water effect ratio, WER, as defined in Subsection 210.03.c.iii. CMC = column B1 value X WER. CCC = column B2 value X WER.
- f. Criterion expressed as total recoverable (unfiltered) concentrations.
- **g.** No aquatic life criterion is adopted for inorganic mercury. However, the narrative criteria for toxics in Section 200 of these rules applies. The Department believes application of the human health criterion for methylmercury will be protective of aquatic life in most situations.
- h. No numeric human health criteria has been established for this contaminant. However, permit authorities should address this contaminant in NPDES permit actions using the narrative criteria for toxics from Section 200 of these rules.

Idaho Administrative Bulletin

Page 197

January 6, 2016 - Vol. 16-1

А	B Aquatic life			<u>⊆</u> Human health for consumption of:			
(Number) Compound	a CAS Number	b CMC (µg/L)	b ccc (µg/L)	Carcinogen?	Water & <del>organisms</del> <u>fish</u> (µg/L)	O <del>rganisms</del> <u>Fish</u> only (µg/L)	
	Number	B1	B2	Carci	C1	C2	

- i. Aquatic life criteria for these metals are a function of total hardness (mg/L as calcium carbonate), the pollutant's water effect ratio (WER) as defined in Subsection 210.03.c.iii. and multiplied by an appropriate dissolved conversion factor as defined in Subsection 210.02. For comparative purposes only, the example values displayed in this table are shown as dissolved metal and correspond to a total hardness of one hundred (100) mg/L and a water effect ratio of one (1.0).
- j. Criteria are expressed as weak acid dissociable (WAD) cyanide.
- k. Total chlorine residual concentrations.
- I. EPA guidance allows states to choose <u>a risk factor from a range</u> of 10<sup>-4</sup> to 10<sup>-6</sup> for the incremental increase in cancer risk used in human health criteria calculation. Idaho has chosen to base this criterion on carcinogenicity of 10<sup>-65</sup> risk.
- m. Aquatic life criteria for pentachlorophenol are expressed as a function of pH, and are calculated as follows.
  Values displayed above in the table correspond to a pH of seven and eight tenths (7.8).

CMC =  $\exp(1.005(pH)-4.830)$ CCC =  $\exp(1.005(pH)-5.290)$ 

- n. PCBs are a class of chemicals which include Aroclors, 1242, 1254, 1221, 1232, 1248, 1260, and 1016, CAS numbers 53469219, 11097691, 11104282, 11141165, 12672296, 11096825 and 12674112 respectively. The aquatic life criteria apply to this set of PCBs.
- o. This criterion applies to total PCBs, (e.g. the sum of all congener, isomer, or Aroclor analyses).
- p. This fish tissue residue criterion (TRC) for methylmercury is based on a human health reference dose (RfD) of 0.0001 mg/kg body weight-day; a relative source contribution (RSC) estimated to be 27% of the RfD; a human body weight (BW) of 70 kg (for adults); and a total fish consumption rate of 0.0175 kg/day for the general population, summed from trophic level (TL) breakdown of TL2 = 0.0038 kg fish/day + TL3 = 0.0080 kg fish/day + TL4 = 0.0057 kg fish/day. This is a criterion that is protective of the general population. A site-specific criterion or a criterion for a particular subpopulation may be calculated by using local or regional data, rather than the above default values, in the formula: TRC = [BW x {RfD (RSCxRfD)}] / $\Sigma$  TL. In waters inhabited by species listed as threatened or endangered under the Endangered Species Act or designated as their critical habitat, the Department will apply the human health fish tissue residue criterion for methylmercury to the highest trophic level available for sampling and analysis.
- g. This criterion is based on the drinking water Maximum Containment Level (MCL).

(3-29-10)(\_\_\_\_

05. Development of Toxic Substance Criteria.

(4-5-00)

b. Human Health Criteria.

(4-5-00)

[Subparagraph 210.05.b.ii.]

Idaho Administrative Bulletin

Page 198

January 6, 2016 - Vol. 16-1

## DEPARTMENT OF ENVIRONMENTAL QUALITY Water Quality Standards

Docket No. 58-0102-1201 Adoption of Pending Rule

ii. When using EPA-recommended criteria toxicity thresholds to derive water quality criteria to protect human health, a fish consumption rate of seventeen point five (17.5) grams/day, a representative of the population to be protected, a mean adult body weight, an adult 90th percentile water ingestion rate of two (2) liters/day, a trophic level weighted BAF or BCF, and a hazard quotient of one (1) for non-carcinogens or a cancer risk level of  $10^{-65}$  for carcinogens shall be utilized.

Note: In 2006, Idaho updated 167 human health criteria for 88 chemicals. On May 10, 2012, EPA disapproved Idaho's 2006 update of 167 human health criteria for toxic substances (see IDAPA 58.01.02.210.01) and the use of 17.5 g/day fish consumption rate for human health criteria. This action was based on EPA's judgment that the fish consumption rate used in criteria derivation was not adequately protective. As a result of this action, the fish consumption rate of 6.5 g/day published in the 2005 version of IDAPA 58.01.02.210.05.b.i. continues to apply and is effective for federal Clean Water Act purposes. For more information regarding this EPA disapproval, go to http://www.deq.idaho.gov/epa-actions-on-proposed-standards.